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ABSTRACT

Out-of-field teaching is a relatively unrecognized problem in schools. This digest reviews what research shows about the extent and causes of the problem. There is much disagreement about how much and which types of education and training teachers should receive and what credentialing requirements states should have. Analysts have used various measures of the issue, each resulting in different estimates of the extent of the problem. Considerable misunderstanding surrounds out-of-field teaching, especially regarding why so many teachers are teaching subjects for which they have little background. The source of out-of-field teaching generally lies in the lack of fit between teachers' fields of training and teaching assignments. Research suggests that teacher shortages are not a major contributor to the problem. A larger problem is how schools and teachers are managed. Principals have considerable discretion in staffing decisions and often find that giving teachers out-of-field assignments is more convenient, less expensive, and less time consuming than the alternatives. Research shows that solving the problem of out-of-field teaching requires more than simply recruiting and training more candidates. It actually requires understanding how teachers are managed once on the job. (Contains 11 references.) (SM)

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Out-of-Field Teaching

Richard M. Ingersoll

The phenomenon of out-of-field teaching – teachers teaching subjects for which they have little education or training – has long been a crucial but relatively unrecognized problem in schools (Robinson, 1985). It is a crucial issue because highly qualified teachers may in actuality become highly unqualified if they are assigned to teach subjects for which they have little training or education. And unqualified teachers may negatively impact student achievement. There has been little national recognition of this problem, however, because of an absence of accurate data. This situation was remedied in the 1990s with the release of the Schools and Staffing Survey (SASS), a major survey of the nation's elementary and secondary schools and teachers conducted by the National Center for Education Statistics (NCES), the statistical arm of the U.S. Department of Education.

Since the release of SASS, NCES has sponsored a number of projects using this survey to profile the extent of out-of-field teaching in the U.S. (e.g., Ingersoll, 1995, 1996; Bobbitt and McMillen, 1995; Smerdon, 1999). This research has documented that out-of-field teaching is an ongoing problem in a wide range of schools across the nation. This digest reviews what the research has shown on the extent and causes of this problem.

The Extent of Out-of-Field Teaching

Empirical measurement of the extent of underqualified teaching is difficult because there is surprisingly little consensus on how to define a "qualified teacher." Although there is almost universal agreement that student learning is affected by the qualifications of teachers, there is much disagreement concerning how much and which types of education and training teachers ought to receive and which kinds of credentials states ought to require of new teachers.

(For a review of the research on the relationship between teacher qualifications and student achievement, see National Commission on Teaching and America's Future, 1996, 1997).

As a result, analysts have used a variety of different measures of out-of-field teaching, each with strengths and weaknesses and each resulting in different estimates of the extent of the problem. Some measures focus on whether teachers have teaching certificates and others focus on whether teachers have undergraduate or graduate degrees in the fields they teach. Measures of out-of-field teaching also vary according to whether they focus on the number of teachers in out-of-field placements or the number of students exposed to it, according to which fields and subjects are examined, and according to which grade levels are investigated. (For a comparison of different measures, see Bobbitt and McMillen, 1995, or Ingersoll, 2000.)

The most commonly used measure of out-of-field teaching adopts a minimal definition of a qualified teacher. This measure assesses how many of those teaching core academic subjects (English, social studies, math, science) at the secondary level do not have either a major or a minor in their teaching fields. A college minor, of course, does not guarantee quality teaching, nor even a qualified teacher. The assumption underlying this measure is that secondary-level teachers of academic subjects ought to have, as a minimum prerequisite, at least a college minor in the subjects they teach.

The SASS data show that even using this minimal standard there are high levels of out-of-field teaching. For example, over one quarter of all secondary school students enrolled in math classes are taught by teachers who do not have

at least a college minor in math, math education, or related disciplines like engineering or physics. About one quarter of all secondary school English teachers have neither a major or minor in English or related subjects such as literature, communications, speech, journalism, English education, or reading education. About a fifth of social studies teachers are without at least a minor in any of the social sciences, public affairs, social studies education, or history.

Since the mid-1990s these and other SASS data on out-of-field teaching have been widely reported and commented upon in the national media and featured in numerous major education reports. As a result, the problem of out-of-field teaching has become a major concern in the realm of educational policy. Despite this attention, however, a great deal of misunderstanding surrounds the problem of out-of-field teaching, especially in regard to the crucial question of why so many teachers are teaching subjects for which they have little background.

The Sources of Out-of-Field Teaching

Many assume that out-of-field teaching is a problem of poorly educated teachers and can be remedied by more rigorous standards for teacher education and training. Typically, those subscribing to this view assume that the source of the problem lies in a lack of academic coursework on the part of teachers that can be remedied by requiring prospective teachers to complete a "real" undergraduate major in an academic discipline or specialty. The data show, however, the source of out-of-field teaching lies not in the amount of education teachers have, but in a lack of fit between teachers' fields of training and their teaching assignments. Hence, reforms designed to upgrade the training of teachers will not eliminate out-of-field teaching, if large

numbers of such teachers continue to be misassigned by their principals.

A second, and also popular, explanation of the problem of out-of-field teaching blames teacher shortages. This view holds that shortfalls in the number of available teachers, caused by a combination of increasing student enrollments and a "graying" teaching force, have led many school systems to resort to lowering standards to fill teaching openings, the net effect of which is out-of-field teaching. The data show, however, there are two problems with the shortage explanation for out-of-field teaching. First, it cannot explain the high levels of out-of-field teaching that the data indicate exist in fields, such as English and social studies, that have long been known to have surpluses. Second, teacher shortages have been exaggerated (Ingersoll, 1999b). The data show that in recent years it is only a minority of schools that actually have any trouble filling their teaching vacancies with qualified candidates. And, moreover, most out-of-field teaching takes place in schools that report no difficulties finding qualified candidates for their openings. For example, less than one tenth of secondary schools had any difficulty filling their openings for English teachers in 1993, but in that same year, a quarter of all public school English teachers were uncertified in English. Likewise, in that year only one sixth of secondary schools reported problems filling their openings for math teachers, but a third of all math teachers had neither a major or minor in math.

Rather than deficits in the qualifications and quantity of teachers, recent analyses of the SASS data suggest the source of out-of-field teaching lies in the way schools and teachers are managed. The data show that the allocation of teaching assignments is usually the prerogative of school principals, and the latter have an unusual degree of discretion in staffing decisions. The training of teachers is subject to an elaborate array of state licensing requirements, but there is far less regulation of how teachers are utilized once on the job (Robinson, 1985). In this context, principals may find

that assigning teachers to teach out of their fields is often not only legal but more convenient, less expensive, and less time consuming than the alternatives. For example, rather than find and hire a new science teacher to teach a newly state-mandated science curriculum, a principal may find it more convenient to assign a couple of English and social studies teachers to each "cover" a section or two in science. If a teacher suddenly leaves in the middle of a semester, a principal may find it faster and cheaper to hire a readily available, but not fully qualified, substitute teacher, rather than conduct a formal search for a new teacher. The degree to which a school is faced with problems of recruitment or retention may shape the extent to which the principal relies on these options, but the data show they are available to almost all schools and used by many. (For a detailed presentation of the data on the causes of out-of-field teaching, see Ingersoll 1999a, 2001.)

Conclusion

Teacher quality has been an important concern of education reformers and as a result, the issue of out-of-field teaching has received a lot of attention in recent years. The research shows however, that solving this problem requires more than simply recruiting and training able candidates – the reforms most often advocated. The data show that solving this problem requires understanding how teachers are managed once on the job.

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